



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER OF PATENTS AND TRADEMARKS
Washington, D.C. 20231
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/854,939	05/15/2001	Evangelos Trifon Laskaris	839-1010	7950

7590 11/01/2002
NIXON & VANDERHYE P.C.
8th Floor
1100 North Glebe Road
Arlington, VA 22201

EXAMINER

LAM, THANH

ART UNIT	PAPER NUMBER
----------	--------------

2834

DATE MAILED: 11/01/2002

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/854,939

Applicant(s)

Laskaris

Examiner

Thanh Lam

Art Unit

2834

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136 (a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on Aug 22, 2002.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11; 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-27 is/are pending in the application.
- 4a) Of the above, claim(s) 12-16 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-11 and 17-27 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claims _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgement is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
*See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgement is made of a claim for domestic priority under 35 U.S.C. § 119(e).
a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgement is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892) 4) ☐ Interview Summary (PTO-413) Paper No(s). _____
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948) 5) ☐ Notice of Informal Patent Application (PTO-152)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s). 6 6) ☐ Other: _____

Art Unit: 2834

DETAILED ACTION

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless -

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

2. Claims 1-11, and 17-27 are rejected under 35 U.S.C. 102(b) as being anticipated by Rabinowitz (4,176,291).

Regarding claims 1, Rabinowitz discloses a rotor (6) for a synchronous machine comprising a cylindrical magnetic solid rotor core (50); a race-track super-conducting coil winding (44) extending around the rotor core; a coil support extending through the core and attaching to opposite long sides of the coil winding, and a pair of end shafts (19) extending axially from said core and attached to the core.

Regarding claims 2, Rabinowitz discloses the rotor core includes a pair of flat surfaces formed on opposite long sides of the rotor core, and said long sides of the coil winding are adjacent the flat surfaces.

Art Unit: 2834

Regarding claims 3, Rabinowitz discloses the rotor core includes conduits extending between the flat surfaces, and further comprising a coil support system extending through the conduits to support the coil winding.

Regarding claims 4, Rabinowitz discloses the coil support system and coil are at cryogenic temperatures, and the coil support system is thermally isolated from the rotor core.

Regarding claims 5, Rabinowitz discloses an insulating tube inserted in the rotor core separates the coil support from the core.

Regarding claims 6, Rabinowitz discloses the end shafts are a non-magnetic metal.

Regarding claims 7, Rabinowitz discloses the end shafts are stainless steel.

Regarding claims 8, Rabinowitz discloses the rotor core is a solid magnetic iron forging.

Regarding claims 9, Rabinowitz discloses the coil has a race-track shape.

Regarding claims 10, Rabinowitz discloses comprising a conductive shield around the rotor core and coil.

Regarding claims 11, Rabinowitz discloses one of said end shafts is a collector end shaft having collector rings and a cryogenic fluid coupling.

Regarding claims 17, Rabinowitz discloses a synchronous machine, a rotor comprising: a cylindrical rotor core (50) having a pair of planer sections (the inner surfaces of the core where the windings 44 contact to, as shown in fig. 2) on opposite sides of the core and extending longitudinally along the core; a super-conducting coil winding (44) extending around at least a portion of the rotor core, said coil winding having a pair of side sections adjacent said planer

Art Unit: 2834

sections of the core; a first end shaft (19) extending axially from a first end of the rotor core, and a second end shaft (19) extending axially from a second end of the rotor core.

Regarding claims 18, Rabinowitz discloses the first end shaft includes a cryogenic coupling for providing cooling fluid to said coil winding.

Regarding claims 19, Rabinowitz discloses a coil support including at least one tension rod (52) extending through the core and attaching to coil housings at opposite ends of the rod, wherein each coil housing wraps around one of the side sections of the coil.

Regarding claims 20, Rabinowitz discloses the coil support and coil are at cryogenic temperatures, and the coil support is thermally isolated from the rotor core.

Regarding claims 21, Rabinowitz discloses an insulating tube inserted in the rotor core separates the tension rod from the core.

Regarding claims 22, Rabinowitz discloses the end shafts are a non-magnetic metal.

Regarding claims 23, Rabinowitz discloses the end shafts are stainless steel.

Regarding claims 24, Rabinowitz discloses the rotor core is a solid magnetic iron forging.

Regarding claims 25, Rabinowitz discloses the coil has a race-track shape.

Regarding claims 26, Rabinowitz discloses a conductive shield around the rotor core and coil.

Regarding claims 27, Rabinowitz discloses one of said end shafts is a collector end shaft having collector rings and a cryogenic fluid coupling.

Art Unit: 2834

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Thanh Lam whose telephone number is (703) 308-7626. The fax phone number for this Group is (703) 305-3432.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the Group receptionist whose telephone number is (703) 308-0656.

A handwritten signature in black ink, appearing to read 'Thanh Lam', with a stylized flourish at the end.

Thanh Lam

Patent Examiner

Oct. 30, 2002